

NAME and SCHOOL DISTRICT:

Catasauqua Area School District

- Sheckler Elementary School (K-4)
- Catasauqua Middle School (5th Grade)

GOAL:

District: CASD students (K-5) will implement the use of scientific explanations that include the components of claims, evidence, and reasoning.

Grade K Goal: During the school year, the teacher will model scientific explanations that state claims.

1st Grade Goal: By the end of the first grade school year, students will implement scientific explanations that state claims based on evidence. This will be done independently, verbally, and/or in written form.

2nd Grade Goal: By the end of the second grade school year, students will implement scientific explanations that state claims. This will be done independently, verbally, and/or in written form. The teacher will guide the evidence and reasoning components.

3rd Grade Goal: By the end of the third grade school year, students will implement scientific explanations that state claims and be supported with evidence. This will be done independently, verbally, and/or in written form. The teacher will guide the reasoning component.

4th Grade Goal: By the end of the fourth grade school year, students will implement scientific explanations that state claims and be supported with evidence. The students will defend their thinking with reasoning statements. This will be done independently, verbally, and/or in written form.

5th Grade Goal: Students will continue to implement scientific explanations that state claims and be supported with evidence. The students will continue to defend their thinking with reasoning statements. This will be done independently by verbal or written form.

TIMELINE:

2011-2012 School Year Fifth Grade

PLAN STRATEGIES FOR IMPLEMENTATION:	OUTCOMES TO INDICATE SUCCESS:	RESOURCES
Review prior knowledge -- claims, evidence, and reasoning	By the end of fifth grade the students will write claims supported by evidence and reasoning using the student notebook, peer and teacher observation, and teacher supplied rubric.	Rubric
Model process		FOSS kits
Give students criteria and discuss		student notebooks
Give students rubric and discuss		Science magazine

Catasauqua Area School District- November- July 1, 2011

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Grade K Goal: To develop a common language by modeling processing skills of observing and questioning.

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5th Grade Goal: Students will continue to implement scientific explanations that state claims and be supported with evidence. The students will continue to defend their thinking with reasoning statements. This will be done independently by verbal or written form.

TIMELINE:

2011-2012 School Year

2nd Grade- Brad Evans and Erica Schlamp

PLAN STRATEGIES FOR IMPLEMENTATION:	OUTCOMES TO INDICATE SUCCESS:	RESOURCES
<p>Teacher will review scientific explanations:</p> <ul style="list-style-type: none"> • Meaning of a claim • Components of a claim explanation • Provide models of evidence explanations (strengths, weaknesses, connections to everyday explanations) • Discuss rationale for creating reasoning explanations 	<p>By the end of the Second Grade school year, students will implement explanations and state claims.</p> <p>The students will communicate components of a scientific claim and evidence through notebooks, peer and teacher observation, and rubrics.</p>	<p>FOSS, STC science modules</p> <p>Student science notebooks, textbooks, and storybooks.</p> <p>Basic Explanation Rubric</p> <p>Colleague Collaboration</p>

INSTITUTE FOR INQUIRY ACTION PLAN

NAME and SCHOOL DISTRICT:

Catasauqua School District

GOAL:

By the end of the first grade school year, students will implement scientific explanations that state claims based on evidence. This will be done independently, and/ or written form. The teacher will guide the reasoning and evidence components.

TIMELINE:

2011 – 2012 school year

PLAN STRATEGIES FOR IMPLEMENTATION:

Teacher will introduce scientific explanations through modeling and scaffolding:

- *Meaning of an explanation
- *Components of an explanation
- *Provide models of explanations (strength, weaknesses, connections to everyday explanations)

Teacher and students create scientific explanations utilizing claims and evidence.

OUTCOMES TO INDICATE SUCCESS:

By the end of first grade, students, with guidance from the teacher, will state claims and support them with evidence.

Students will communicate scientific knowledge by illustrations, verbally or through writing.

RESOURCES

- * Weather Kit
- * Liquids and Solids
- * Organisms
- * Student Notebook
- * Teacher Inquiry Notebook
- * Rubric

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Catasauqua Area School District

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Grade K Goal: To develop a common language by modeling processing skills of observing and questioning.

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4th Grade Goal: By the end of the fourth grade school year, students will implement scientific explanations supported with evidence. The students will defend their thinking with reasoning statements. This will be done independently, verbally, and/or in written form.

5th Grade Goal: Students will continue to implement scientific explanations that state claims and be supported with evidence. The students will defend their thinking with reasoning statements. This will be done independently, verbally, and/or in written form.

TIMELINE:

2011-2012 School Year

**3rd GRADE: Claudette Burkner, Laura Gregson, Cindy Kuntzman, Wendy Laubenstein, Valerie
James Wilson**

PLAN STRATEGIES FOR IMPLEMENTATION:

Teacher will review scientific explanations:

- Meaning of an explanation
- Components of an explanation
- Provide models of explanations (strengths, weaknesses, connections to everyday explanations)
- Discuss rationale for creating explanations

Teacher and students create scientific explanations utilizing claims and evidence.

Students create scientific explanations utilizing claims and evidence.

Teacher will assess and provide feedback to students

OUTCOMES TO INDICATE SUCCESS:

By the end of the third grade school year students will state claims and support the claims with evidence.

The students will communicate the two components of a scientific explanation through notebooks, peer and teacher observations and rubrics.

NAME and SCHOOL DISTRICT:

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5th Grade Goal: Students will continue to implement scientific explanations that state claims and be supported with evidence. The students will continue to defend their thinking with reasoning statements. This will be done independently by verbal or written form.

TIMELINE:

2011-2012 School Year: Fourth Grade

PLAN STRATEGIES FOR IMPLEMENTATION:	OUTCOMES TO INDICATE SUCCESS:	RESOURCES
<p>Teacher will review scientific explanations:</p> <ul style="list-style-type: none">• Meaning of an explanation• Components of an explanation• Provide models of explanations (strengths, weaknesses, connections to everyday explanations)• Discuss rationale for creating explanations <p>Teacher will review prior knowledge of claims, evidence, and reasoning.</p> <p>Introduce the Criteria Rubric and attach to notebook.</p> <p>Introduce and utilize teacher generated worksheet containing the three focus areas.</p> <p>Investigation #1=Modeling through teacher-guided instruction:claim, evidence, reasoning</p> <p>Investigation #2=Group work:claims, evidence and reasoning</p> <p>Investigation #3=Individual work for claims,</p>	<p>By the end of the fourth grade year, the student</p> <p>will be able to write claims, support them with evidence, and use reasoning to demonstrate</p> <p>scientific knowledge in a variety of topic areas.</p> <p>Communication of the three levels of scientific explanation will occur through FOSS notebooks, peer observations, teacher observations, and appropriate rubrics.</p>	<p>* FOSS Science Kits</p> <p>*Textbooks</p> <p>*FOSS Notebooks</p> <p>*Science Story Books</p> <p>*Video(s)</p> <p>*BaseExplanationRubric</p> <p>*Worksheets</p>

evidence, and reasoning Teacher will assess and provide feedback to students. Students will also provide feedback to each other.		
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INSTITUTE FOR INQUIRY ACTION PLAN

NAME and SCHOOL DISTRICT:

01-01 CATASAUQUA MIDDLE SCHOOL

GOAL:

To take a lesson and move the focus from a TEACHER DIRECTED activity to a LEARNER CENTERED activity by using the Essential Features of Inquiry and their Variations. To sharpen, clarify, analyze, communicate and justify explanations.

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TIMELINE:

Fall of 2011-2012

PLAN STRATEGIES FOR IMPLEMENTATION	OUTCOMES TO INDICATE SUCCESS:	RESOURCES:
<p>Teacher will use a motivate technique to generate students interest by using folk tales, stories, pictures, web sites. :</p> <p>To take an opening statement and adjust the Inquiry features to move from a Teacher Directed statement to a Learner Centered question to a science lesson.</p>	<p>Students will work in small groups and brainstorm ideas from opening statement and record ideas on tablet paper and then placed on chart paper.</p>	<p>Writing paper, chart paper, markers and pencils.</p>

<p>After responses recorded on chart paper, the chart paper will be hung around the room for class viewing. The class will identify similarities on a separate piece of chart paper. Each group will place a sticker on the three items that interest them the most to explore. The top three items will be written in the science notebook.</p>	<p>Learners will identify areas of interest to study and research.</p>	<p>Sticker and science notebook</p>
<p>Each group will pick one response as their focus to drive the interest of the prior knowledge portion of the lesson.</p>	<p>Students will use prior knowledge focus question to gather information using different sources.</p> <p>Computer</p> <p>Library</p> <p>People in the field</p>	<p>Computer, professionals in the field, literature search</p>

<p>After each group gathers prior knowledge information. Each group will present its research in any format they chose. Slide show, poster, speech, etc.</p> <p>After presentation. Resume science lesson schedule for study.</p>	<p>Presenting of prior knowledge through group presentation.</p>	<p>Materials used for presentation purpose.</p> <p>Science kit and notebook.</p>
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INSTITUTE FOR INQUIRY ACTION PLAN

NAME and SCHOOL DISTRICT: NAME and SCHOOL DISTRICT: 02/172011

Catasauqua Area School District

- Sheckler Elementary School (K-4)
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TIMELINE:

2011-2012 School Year

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Teacher will review scientific explanations:

- Meaning of an explanation
- Components of an explanation
- Provide models of explanations (strengths, weaknesses, connections to everyday explanations)
- Discuss rationale for creating explanations

Teacher and students create scientific explanations utilizing claims and evidence.

Teachers will assess and provide feedback to students.

OUTCOMES TO INDICATE SUCCESS:

By the end of the second grade school year, students will state claims and support the claims with evidence.

The students will communicate the two components of a scientific explanation through notebooks, peer and teacher observation, and rubrics.

RESOURCES

FOSS, STC science modules

Student science notebooks, textbooks, and storybooks.

Basic Explanation Rubric

INSTITUTE FOR INQUIRY ACTION PLAN

NAME and SCHOOL DISTRICT: NAME and SCHOOL DISTRICT: 09/08/1961

Catasauqua Area School District

- Sheckler Elementary School (K-4)
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INSTITUTE FOR INQUIRY ACTION PLAN

NAME and SCHOOL DISTRICT: NAME and SCHOOL DISTRICT: 11/05/2011

Catasauqua Area School District

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Teacher and students create scientific explanations utilizing claims and evidence.

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Basic Explanation Rubric

NAME and SCHOOL DISTRICT:

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PLAN STRATEGIES FOR IMPLEMENTATION:	OUTCOMES TO INDICATE SUCCESS:	RESOURCES
Teacher will review scientific explanations: <ul style="list-style-type: none">• Meaning of an explanation• Components of an explanation• Provide models of explanations (strengths, weaknesses, connections to everyday explanations)• Discuss rationale for creating explanations Teacher and students create scientific explanations utilizing claims and evidence. Students create scientific explanations utilizing claims and evidence. Teacher will assess and provide feedback to students	By the end of the third grade school year, students will state claims and support the claims with evidence. The students will communicate the two components of a scientific explanation through notebooks, peer and teacher observation, and rubrics.	FOSS, STC science modules Student science notebooks, textbooks, and storybooks. Basic Explanation Rubric

INSTITUTE FOR INQUIRY ACTION PLAN

Sheckler Elementary School

Catasauqua Area School District

NAME and SCHOOL DISTRICT:

Catasauqua Area School District

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will continue to defend their thinking with reasoning statements. This will be done independently by verbal or written form.

TIMELINE:

2011-2012 School Year

3rd GRADE: Claudette Burkner, Laura Gregson, Cindy Kuntzman, Wendy Laubenstein, Valerie Roberts, Kelly Strauch, and James Wilson

PLAN STRATEGIES FOR IMPLEMENTATION:	OUTCOMES TO INDICATE SUCCESS:	RESOURCES
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Catasauqua Area School District- May- July 1, 2011

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TIMELINE:

2011-2012 School Year

2nd Grade- Brad Evans and Erica Schlamp

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INSTITUTE FOR INQUIRY ACTION PLAN

NAME and SCHOOL DISTRICT:

Catasauqua Middle School

12/02/54

GOAL: CASD students (K-6) will implement the use of scientific explanations that include the components of claims, evidence, and reasoning.

6th Grade Goal: By the end of sixth grade, students will implement scientific explanations that state claims and be supported with evidence. The students will defend their thinking with reasoning statements. This will be done by groups in written form.

TIMELINE:

Academic school year 2011-2012

PLAN STRATEGIES FOR IMPLEMENTATION:

- *The teacher will explain the three components of a Scientific Explanation.
- *During each Marking Period/module, one of the components will be added.
- *During the Final Marking Period, students will write a complete Scientific Explanation with all three components.
- *Practice throughout modules.

OUTCOMES TO INDICATE SUCCESS:

- *Students will use the correct language verbally and written for the Scientific Explanation
 - “I claim that...” based on the data collected, questions and observations
 - “My evidence shows that ...” by backing up the claim with data such as facts, descriptions or numbers
 - Reasoning:
 - “My evidence makes sense because I know that...” by using prior knowledge, science concepts or expert sources

RESOURCES

- *Investing in Innovation binder
- *Different modules used
- *Harcourt Science textbook
- *NSRC – National Science Resources Center booklet